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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/498,749	02/07/2000	Noboru Masuda	33216M038	9264

7590 01/10/2006

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EXAMINER	
LAMB, BRENDA A	
ART UNIT	**PAPER NUMBER**
1734	

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/498,749	MASUDA ET AL.	
	Examiner	Art Unit	
	Brenda A. Lamb	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7-23,27,29,30 and 49-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-3,7-10,12,13,15,16,18,19,21,22,27,29,30 and 49-57* is/are allowed.

6)☒ Claim(s) *11,14,17,20 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/2005 has been entered.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11,14,17,20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milbourn et al.

Milbourn et al teaches an intermittent coating apparatus comprising:

intermittent coating supply means, including pump 20 which intermittently feeds a coating to a nozzle; coating returning means including a piston 28 that intermittently draws the coating out of the nozzle, and feeds the coating to the nozzle to return the coating to the nozzle; and control means which includes controller 38 for controlling valve 26 and piston 28. Milbourn et al teaches the controller 38 controls timing operation of valve 26 and piston 28. Milbourn et al teaches the timing of the operation of valve 26 and piston 28 is adjustable (see column 4 lines 23-66). Milbourn et al fails to teach the timing of the operation of valve 26 and piston 28 is such that the operation time A to draw the coating out of the nozzle is less than an operation time B to return the coating to the nozzle. However, it would have been obvious in the Milbourn et al apparatus to adjust the operation timing for valve 26 and piston 28 using the Milbourn et al controller having means to adjust operation timing for valve 26 and piston 28 in such a manner that operation time A to draw the coating out of the nozzle A is less than an operation time B to return the coating to the nozzle dependent on desired spacing of the patches of coating on the substrate. With respect to claim 14, the functional recitation that coating is drawn out of the nozzle in an amount set forth in the instant claim has not been given patentable weight because it is narrative in form. In order to be given patentable weight, functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional recitation. In re Fuller, 1929 C.D. 172; 388 O.G. 279. In any event, Milbourn et al teaches the stroke of the piston is adjustable and therefore the volume of coating

withdrawn from the nozzle is adjustable. Milbourn et al fails to teach the stroke of the piston is adjustable such the amount of coating withdrawn is within the scope of the claim. However, it would have been obvious to optimize the stroke on the adjustable stroke piston in the Milbourn et al apparatus such that it is within the scope of the claim dependent on the desired application rate of coating to the substrate. With respect to claims 20 and 17, the functional recitation that the coating is returned to the nozzle at a rate within the scope of the claim has not been given patentable weight because it is narrative in form. In order to be given patentable weight, functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional recitation. In re Fuller, 1929 C.D. 172; 388 O.G. 279. In any event, Milbourn et al adjustable stroke, high speed piston which moves about 2 msec. Milbourn et al also teaches the pump used in his apparatus is an adjustable flow rate or gear metering pump. Therefore, it would have been obvious to optimize the stroke on the high speed adjustable stroke piston as well as the flow rate from the metering pump in the Milbourn et al apparatus such that the flow rate of coating returning to the nozzle is within the scope of the claim dependent on the desired application rate of coating to the substrate. With respect to claim 23, although Milbourn et al fails to teach the coating returning means includes a piezoelectric element but obvious to drive its coating returning means which includes piston 28 using a conventional drive such as piezoelectric element for the obvious advantages of greater control of the coating process.

Applicant's argument that his invention as claimed defines over Milbourn et al is found to be non-persuasive. The examiner maintains that although Milbourn et al fails to teach the timing of the operation of valve 26 and piston 28 is such that the operation time A to draw the coating out of the nozzle is less than an operation time B to return the coating to the nozzle, it would have been obvious in the Milbourn et al apparatus to adjust the operation timing for valve 26 and piston 28 using the Milbourn et al controller having means to adjust operation timing for valve 26 and piston 28 in such a manner that operation time A to draw the coating out of the nozzle A is less than an operation time B to return the coating to the nozzle dependent on desired spacing of the patches of coating on the substrate.

Claims 1-3, 7-10, 12-13, 15-16, 18-19, 21-22, 27,29-30 and 49-57 are allowed.

Any inquiry concerning this communication should be directed to Brenda A. Lamb at telephone number (571) 272-1231. The examiner can normally be reached on Monday and Wednesday thru Friday with alternate Tuesdays off.

Brenda A Lamb
Examiner
Art Unit 1734